We claim:

1. A material comprising:

a polyurethane gel that includes elastic microspheres as filler.

2. The material according to claim 1, wherein the elastic microspheres includes polymer material.

3. The material according to claim 2, wherein the polymer material includes polyolefin.

4. The material according to claim 2, wherein the polymer material includes expanded polymer material.

5. The material according to claim 1, wherein the microspheres have a cover layer coating that includes an inorganic material.

6. The material according to claim 5, wherein the inorganic material includes calcium carbonate.

7. The material according to claim 1, wherein the microspheres have a diameter in a range of 10 μm to 150 μm.

8. The material according to claim 1, wherein a proportion of microspheres in the material is from 0.1% to 10 % of total material weight.

9. The material according to claim 1, wherein the polyurethane gel includes an undercured reaction product of polyols and polyisocyanates.

10. The material according to claim 1, wherein the polyurethane gel includes an undercured reaction product of polyethers and polyisocyanates is used for the gel.

11. The material according to claim 1, wherein the polyurethane gel includes a polyol component having an isocyanate functionality of at least 5.2.

12. The material according to claim 1, wherein the polyurethane gel includes a polyol component having an isocyanate functionality of at least 6.5.

13. The material according to claim 1, wherein the polyurethane gel includes a polyol component having an isocyanate functionality of at least 7.5.

14. The material according to claim 1, wherein the polyurethane gel includes a polyol component that includes a mixture of:

a first component that includes one or more polyols having hydroxyl numbers below 112 and second component that includes one or more polyols having hydroxyl numbers in the range from 112 to 600, wherein a weight ratio of the first component to the second component is in a range from 90:10 to 10:90, an isocyanate characteristic of a reaction mixture of the first component and the second component lies in a range from 15 to 60 and a product of isocyanate functionality and functionality of the polyol component is at least 6.

15. The material according to claim 1, wherein the polyol component for producing the gel includes one or more polyols having a molecular weight in a range between 1,000 and 12,000 and an OH number in a range between 20 and 112 and a product of isocynate functionality and functionality of the one or more polyols is at least 5 and an isocyanate characteristic is in a range between 15 and 60.

16. The material according to claim 1, further including isocyanates utilized in producing the polyurethane gel, wherein the isocyanates are of a formula $Q(NCO)_n$, in which n represents 2 to 4 and Q selected from the group consisting of an aliphatic hydrocarbon radical having 8 to 18 C atoms, a cycloaliphatic hydrocarbon radical having 4 to 15 C atoms, an aromatic hydrocarbon radical having 6 to 15 C atoms and an araliphatic hydrocarbon radical having 8 to 15 C atoms.

17. The material according to claim 1, wherein the polyurethane gel includes pure form isocyanates utilized in production of the polyurethane gel.

18. The material according to claim 1, wherein the polyurethane gel includes modified isocyanates utilized in production of the polyurethane gel.

19. The material according to claim 1, wherein the polyurethane gel includes urethanised isocyanates utilized in production of the polyurethane gel.

20. The material according to claim 1, wherein the polyurethane gel includes allophanised isocyanates utilized in production of the polyurethane gel.

21. The material according to claim 1, wherein the polyurethane gel includes biurethised isocyanates utilized in production of the polyurethane gel.

22. A process for producing a material from a polyurethane gel comprising:

incorporating elastic microspheres as filler into the polyurethane gel during production of the polyurethane gel; and

avoiding introduction of gas into the polyurethane gel during the production of the polyurethane gel.

23. The process according to claim 22, further including:

adding the elastic microspheres to a polyol component of the polyurethane gel for further processing with the polyol component of the polyurethane gel .

24. The process according to claim 22, further including:

adding the elastic microspheres to a polyisocyanate component for further processing with the polyisocyanate component.

25. The process according to claim 22, wherein the elastic microspheres include a polymer material and an inorganic material coating.

26. The process according to claim 25, wherein the polymer material includes a polyolefin.

27. The process according to claim 25, wherein the inorganic material includes calcium carbonate.

28. The process according to claim 22, further including:

mixing the elastic microspheres into at least one polyurethane component with high shearing energy.

29. The process according to claim 28, wherein the high shearing energy is supplied with a high-speed mixer.

30. The process according to claim 22, further including:

utilizing a dissolving means to mix the elastic microspheres with at least one polyurethane component.